

THE BRITISH CHELONIA GROUP (BCG)

BIOSECURITY GUIDELINES

All public meetings to which animals are brought must comply with the attached biosecurity guidelines, copies of which are available from the General Secretary or the Veterinary Liaison Officer.

Veterinary guidelines on physical examination of a tortoise and biosecurity measures for a tortoise weigh-in

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In recent years there has been an increase into research into chelonian diseases which has led to a number of novel infections being identified as endemic in captive chelonian populations. Infectious diseases are now known to be responsible for common conditions such as runny nose syndrome (RNS), pneumonia and mouth rot.

As a result many individuals and societies feel that inadvertent mixing of chelonians at tortoise weigh ins present an unacceptable disease risk and these events should no longer be continued.

However these events do provide an opportunity for owners, who may have minimal knowledge, to be appropriately advised on the needs of captive tortoises. Equally many of these tortoises never receive a clinical examination by a veterinary surgeon and a suitably experienced tortoise keeper can provide a quick physical examination to detect overt disease or husbandry problems. The BCG is undertaking an ongoing evaluation into the risk and the benefits of these events.

It is important that any events run by the BCG regions are at a minimum standard to reduce the risk of disease transmission between tortoises and that the individuals examining tortoises have received suitable guidance on performing a physical examination. These notes comprise a working document that will be continuously modified as more information becomes available. Any event falling short of these guidelines will no longer be endorsed by the BCG and tortoise health checks may be visited to assess biosecurity standards. All events should be notified to the BCG in advance and a report should be submitted to the BCG committee. Further assistance should be sought if required from the Veterinary Liaison Officer via email:

vet@britishchelonigroup.org.uk

Biosecurity of chelonians

Many tortoises presenting at these events may live in isolation and never see another tortoise. These animals can harbour a number of organisms but in themselves may appear healthy. They are capable of transmitting these to other tortoises and cause illness or indeed become exposed to agents themselves and become ill.

Members of the public will have minimal knowledge of disease transmission between tortoises. Current evidence suggests that airborne transmission may be of minimal importance but transmission by direct contact or indirect contact is of extreme importance. In order to minimise this, the following advice should be adhered to. If an owner fails to comply they should be asked to leave the event. Organisers should be vigilant to ensure compliance for the duration of the event.

1. Notices should be displayed detailing biosecurity measures.

2. Upon entry to the building owners should be given written advice and asked to use an approved hand gel. A list of approved agents is provided in the appendix.
3. All tortoises should be kept singly in a secure solid carrier (sufficient to withstand the full bladder contents of the tortoise) at all times during the event and not removed at any point by the owner. Isolation of each tortoise from other individuals is of primary importance.
4. When presented for examination the handler should wear disposable gloves and a clean disposable apron. Any sleeves should be rolled up to ensure there is no contamination of the clothing of the examiner. Ask the owner to place the carrier on the table. The tortoise should be removed and any if there is any overt contamination with faeces or urine the tortoise should be wiped clean immediately with paper or a disinfectant wipe and this placed into clinical waste. The physical examination is then performed. See the attached guidelines on how this should be conducted. If any signs of overt infectious conditions are identified the owner should be advised to seek veterinary attention immediately and the tortoise should be removed from the venue.
5. The tortoise should be weighed on accurate scales down to 1g for those animals up to 1kg and accurate to 10g for those animals over 1kg. The Jackson ratio is no longer recommended for all tortoises, so there is no specific requirement to measure the tortoise's horizontal carapace length.
6. The tortoise should be replaced into its carrier and returned to the owner.
7. Should there being any faeces or urine spillage these should be cleaned up using paper towel prior to disinfection.
8. The table, scales and any instrumentation used should be thoroughly cleaned with one of the recommended disinfectants, with instrumentation being soaked in disinfectant in between use. Cleaning should be performed with paper or wipes impregnated with an approved disinfectant and disposed of in clinical waste.
9. The gloves should be removed and placed into clinical waste.
10. If there is any contamination of the plastic apron then this should also be changed.
11. A hand gel should be used (of an approved disinfectant) and a clean pair of gloves used for the next tortoise.

Physical examination

Sadly many individuals will be cold at the time of presentation and this will limit the usefulness of the physical examination. The limitations of a physical examination of a tortoise by a tortoise keeper should be discussed with the owner and if in any doubt the default option is for the owner to visit a veterinary surgeon. Under no circumstances should there be any attempt to diagnose or treat a tortoise at these events. It may be possible that a local veterinary surgeon will be willing to perform the physical examinations and be assisted by experienced tortoise owners. They should still adhere to these guidelines as a minimum standard.

1. The exact species should be identified. There are a number of spur thighed tortoise subspecies that do not hibernate for example and if there is any doubt as to the species presented expert advice should be sought and photographs taken to assist in species identification.
2. Start by closely observing the tortoise's activity. It should be bright and alert and active and capable of lifting its plastron clear of the table. Watch and observe the tortoise take a breath and assess the degree of exertion. Tortoises with respiratory problems typically extend their legs further and in severe cases can extend their head and neck and even tremor the lower jaw all of which can indicate respiratory disease and veterinary attention should be sought.

3. The head should be examined first and the eyes assessed. There should be no signs of swelling, redness or discharge. All these could indicate an infectious agent.
4. The ears should be closely evaluated from above and any swellings may indicate an ear infection and veterinary treatment should be sought.
5. A second handler to restrain the tortoise will be required at this point. They should hold the tortoise vertically by holding the sides at the plastro-carapacial bridge. They can also gently restrain the front legs if required.
6. The head should be gently restrained using the thumb and second finger in order to evaluate the mouth (or sooner if required).
7. The nose should be dry and of normal pigmentation. Gentle pressure should be applied to the ventral jaw with the other hand. If there any nasal depigmentation or discharges noted the tortoise may be suffering from infectious disease.
8. The lower jaw can be opened using gentle pressure on the front of the mouth. The first finger can then be used as a gag to keep the mouth open.
9. A clean cotton bud can be used to clear the mouth of mucus to allow a full evaluation. A focal light source such as a pen torch will facilitate oral examination.
10. The tongue should be examined and any redness or discharges should be noted. Mouth rot (more appropriately called stomatitis) indicates an infectious disease. A tortoise's windpipe is usually closed and should be closely observed. Ideally wait for the tortoise to take a breath and listen closely for any fluid noises as well as observing the larynx. The choanae should also be examined for redness or fluid. Any discharge, fluid noises when taking a breath or exertion noted could indicate respiratory disease which could be infectious.
11. The beak should be examined and any overgrowth assessed and the owner advised accordingly. Beak trimming should only be performed by experienced individuals.
12. The front limbs and neck should be examined next and any swellings noted which could indicate fluid retention or an abscess. In these cases veterinary attention should be sought. External parasites are unusual in chelonians but may be present on a recently imported specimen. If identified the tortoise should be taken to a veterinary surgeon. Retained skin is not uncommon in tortoises with poor husbandry.
13. The hind limbs and tail should be examined next. Once again any swellings should be noted. The vent should be evaluated for any discharges. Some tortoises may prolapse their cloacal organ during the examination. It should be noted that female tortoises can also have a cloacal organ.
14. Nail trimming should only be performed by experienced individuals and only after the owner has been advised.
15. Finally the shell can be examined for signs of reddening, compression, injuries or bone loss. Veterinary attention should be sought when warranted for severe injuries.

Approved disinfectants

It is important that disinfectants are used that are safe when in contact with humans and tortoises and are effective against a wide range of pathogens. Many marketed require high concentrations, prolonged exposure time or have a limited range of pathogens that are susceptible. Agents listed here appear on the approved list of disinfectants on the Department of Food and Rural Affairs (DEFRA) website. Please read any instructions supplied with these agents to ensure a virucidal concentration is achieved. F10 disinfectant is a suitable safe agent in common usage. Handgels and wipes are available. The ready-to-use disinfectant should be diluted 1:250 with tap water for general use. It is available online from Meadows animal healthcare.
www.meadowsanimalhealthcare.co.uk.

Product Name	Company Name	Address
Avisafe	Vetafarm Europe Limited	United 21/22 Spring Mill Ind Estate Avening Road, Nailsworth GLOS
Enviroclens	Bird Care	Unit 21 Spring Mill Ind Est Nailsworth GL6 OBS
F10SC Veterinary Disinfectant	Health and Hygiene (Pty) Ltd	P O Box 347 Sunninghill 2157 South Africa S. Africa
Trigene Advance	Medichem International (Marketing) Ltd	P.O. Box 237 Sevenoaks KENT TN15 0ZJ
Vanodine	Pfizer Ltd	(IPC 687) Ramsgate Road Sandwich CT13 9NJ
Virkon Advanced	Antec International (a DuPont Company)	Windham Road Chilton Industrial Estate Sudbury CO10 2XD
Virkon Professional	Astoe Ltd	Sheriff Hutton Industrial Park Sheriff Hutton York YO60 6RZ